Claims

1. Suspension system connecting a wheel support to a body of a vehicle, the wheel support being designed to carry a wheel of radius "r", the wheel being intended to rest on the ground via a contact area, the system comprising:
means that confer upon the wheel support, relative to the body, a degree of freedom of camber and a degree of freedom of deflection of the suspension which are independent of one another,
wherein the system is configured in such manner that the camber movement of the wheel support relative to the body has, around a mean position, an instantaneous center of rotation located within a range from 2.5r above ground to r below ground.

2. System according to Claim 1, wherein the instantaneous center of rotation is located in a range from 0.3r above ground to 0.5r below ground.

3. System according to Claim 2, wherein the instantaneous center of rotation is located in a range from 0.2r above ground to 0.4r below ground.

4. System according to Claim 3, wherein the instantaneous center of rotation is located in a range from 0.1r above ground to 0.3r below ground.

5. System according to Claim 1, wherein the instantaneous center of rotation is located in a range from 0.5r above ground to 1.5r above ground.

6. System according to Claim 1, wherein the instantaneous center of rotation is located in a range from 1.5r above ground to 2.2r above ground.

7. System according to claim 1, configured such that the system is close to equilibrium in the mean position when no transverse force is exerted by the ground on the wheel in the contact area.

8. System according to Claim 7, configured such that in the absence of camber variations the transverse force exerted by the ground on the wheel in the contact area generated during large suspension deflections does not exceed a limit corresponding to 0.3P, "P" being the axle load.

9. System according to Claim 1, comprising a rocker connected on the one hand to the body and on the other hand to the wheel support, such that the link of the rocker to the body enables the degree of freedom of the camber.

10. System according to Claim 1, wherein the instantaneous center of rotation is located below ground level so that the transverse forces exerted by the ground on the wheel in the contact area induce an inclination of the wheel support relative to the body in the direction of reduced camber when the transverse forces are directed towards the inside of the vehicle, and in the direction of increased camber when the transverse forces are directed towards the outside of the vehicle.

11. System according to Claim 9, comprising means for measuring the couple exerted on the rocker in order to deduce from this the transverse forces undergone by the wheel.

12. System according to Claim 10, comprising means for measuring the displacement of the rocker in order to deduce from this the transverse forces.

13. System according to Claim 9, wherein the rocker is connected to the body by two rods so configured as to allow the camber movement of the wheel support by virtue of an instantaneous rotation movement of the rocker relative to the body.

14. System according to Claim 13, wherein the rods are articulated via at least one elastomeric articulation.

15. System according to Claim 9, wherein the rocker is connected to the body by a curved slide-bar so configured as to allow the camber movement of the wheel support by virtue of an instantaneous rotation movement of the rocker relative to the body.

16. System according to Claim 9, wherein the rocker is connected to the body by two straight slide-bars so as to allow the camber movement of the wheel support by virtue of an instantaneous rotation movement of the rocker relative to the body.

17. System according to Claim 9, wherein the rocker is connected to the body so that it can rotate about a point located above the rocker.

18. System according to Claim 9, wherein the wheel support is connected to the rocker via a Macpherson system.

19. System according to Claim 1, comprising in addition control means that can influence the camber of the wheel.

20. System according to Claim 19, wherein the control means act on the movement of the rocker relative to the body in such manner as to influence the camber of the wheel.

21. System according to Claim 19, wherein the control means comprise a damper.

22. System according to Claim 19, wherein the control means comprise an actuator controlled as a function of running parameters of the vehicle.

23. System according to Claim 9, comprising means that connect the wheel support to the rocker for controlling the steering.

24. System according to Claim 23, wherein the steering control means connect the wheel support to the rocker in such manner that the steering depends on the camber movement.

25. System according to Claim 9, comprising in addition an opposed wheel support designed to carry an opposed wheel of an axle of the vehicle, the opposed wheel support being connected to the rocker in accordance with a configuration symmetrical to that of the wheel support.

26. Vehicle equipped with the system according to Claim 1.

27. Vehicle equipped on the same axle with two systems according to Claim 1, the systems being arranged essentially symmetrically relative to the longitudinal axis of the vehicle.

28. Vehicle according to Claim 27, wherein the systems are interconnected so that the camber movements of each wheel support are coupled.

29. Vehicle according to Claim 27, wherein the systems comprise control means that can influence the camber of the wheel and are controlled independently of one another.

30. Vehicle according to Claim 26, equipped with a system comprising control means that can influence the camber of the wheel and an opposed wheel support designed to carry an opposed wheel of an axle of the vehicle, the opposed wheel support being connected to the rocker in accordance with a configuration symmetrical to that of the wheel support, and having an actuator that is piloted as a function of running parameters of the vehicle.

31. System according to Claim 2, wherein the instantaneous center of rotation is located below ground level so that the transverse forces exerted by the ground on the wheel in the contact area induce an inclination of the wheel support relative to the body in the direction of reduced camber when the transverse forces are directed towards the inside of the vehicle, and in the direction of increased camber when the transverse forces are directed towards the outside of the vehicle.

32.. System according to Claim 3, wherein the instantaneous center of rotation is located below ground level so that the transverse forces exerted by the ground on the wheel in the contact area induce an inclination of the wheel support relative to the body in the direction of reduced camber when the transverse forces are directed towards the inside of the vehicle, and in the direction of increased camber when the transverse forces are directed towards the outside of the vehicle.

33. System according to Claim 4, wherein the instantaneous center of rotation is located below ground level so that the transverse forces exerted by the ground on the wheel in the contact area induce an inclination of the wheel support relative to the body in the direction of reduced camber when the transverse forces are directed towards the inside of the vehicle, and in the direction of increased camber when the transverse forces are directed towards the outside of the vehicle.